

AMENDMENT(S) TO THE CLAIMS

1
2
3 1. (currently amended): A method comprising;
4 compressing video objects;
5 generating at least one corresponding elementary stream comprising the
6 compressed video objects;
7 classifying information within each elementary stream based on importance
8 and responsive to ~~the compressed video objects as affected a particular video~~
9 object that is selected by at least one user interaction via a remote device that is
10 operatively coupled across a network; and
11 assembling the classified information into packets associated with different
12 classes of network packets.

13
14 2. (original): The method as recited in Claim 1, wherein classifying the
15 information within each elementary stream based on importance further includes
16 assigning different priority levels to shape, motion, and texture information.

17
18 3. (original): The method as recited in Claim 2, wherein assembling
19 the classified information into packets associated with different classes of network
20 packets further includes selectively multiplexing a plurality of the network packets
21 with the same priority level into an application level packet.
22
23
24
25

1 4. (original): The method as recited in Claim 2, wherein assembling
2 the classified information into packets associated with different classes of network
3 packets further includes arranging the content of at least one of the network
4 packets in an interleaving fashion.

5
6 5. (previously presented): The method as recited in Claim 1, wherein
7 the different classes of network packets are associated with the network, which
8 provides differentiated services (Diff- Serv) such that an adaptive transmission
9 environment is implemented for multimedia communications using scalable coding
10 technology.

1 6. (currently amended): A method comprising:
2 packetizing content information including video objects;
3 generating resource coordination information based at least in part on at
4 least one prioritizing parameter associated with an application communicating the
5 content information and on one or more prioritizing parameters associated with a
6 particular video object that is selected by a user interaction via a remote device that
7 is operatively coupled to a network;
8 selectively associating each packet of content information with a service
9 class selected from among at least two different service classes based on the
10 resource coordination information;
11 selectively outputting at least one packet of content information based on a
12 priority associated with the service class associated with the packet of content
13 information; and
14 providing the at least one packet of content information to the network.

15
16 7. (currently amended): The method as recited in Claim 6, wherein the
17 user interaction comprises selection of the particular video object by at least one of
18 mouse clicking, mouse moving, ~~fast forward, fast backward,~~ object zoom-in,
19 object zoom-out, add or delete.

20
21 8. (original): The method as recited in Claim 6, wherein generating the
22 resource coordination information further includes generating the resource
23 coordination information based at least in part on at least one prioritizing
24 parameter associated with a monitored performance of the network.
25

1 **9.** (currently amended): The method as recited in Claim 6, further
2 comprising encoding initial content information as the ~~encoded~~—content
3 information.

4
5 **10.** (original): The method as recited in Claim 9, further comprising
6 segmenting raw video data into a plurality of video objects and wherein at least
7 one of the video objects is included in the initial content information.

8
9 **11.** (previously presented): The method as recited in Claim 9, wherein
10 the initial content information includes data representing media information
11 selected from a group comprising video information, audio information, image
12 information, and textual information.

1 12. (currently amended): One or more A computer-readable media
2 comprising computer instructions for performing acts comprising:

3 generating prioritization information based at least in part on at least one
4 parameter associated with an application streaming media information and on one
5 or more prioritizing parameters associated with a particular video object that is
6 selected from the media information by a user interaction via a remote device that
7 is operatively coupled to a network;

8 associating packets of the media information with a service class selected
9 from a plurality of different service classes based on the prioritization information;

10 selectively discarding a portion of the packets of the media information in
11 accordance with an adaptive rate control mechanism at a sending computing
12 device; and

13 selectively outputting from the sending computing device onto the network
14 some of the packets of media information based on their respective service classes.

15
16 13. (previously presented): The computer-readable media as recited in
17 Claim 12, wherein the media information includes data representing media
18 information selected from a group comprising video information, video objects,
19 audio information, image information, and textual information.

20
21 14. (canceled)

22
23 15. (canceled)

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

16. (canceled)

17. (canceled)

18. (canceled)

1 19. (currently amended): An apparatus comprising:

2 packetizer logic configured to receive encoded content information and
3 output corresponding packets of content information, the content information
4 including video objects;

5 collaborator logic operatively coupled to the packetizer logic and
6 configured to receive at least one prioritizing parameter associated with at least
7 one application, including an application communicating the content information,
8 and one or more prioritizing parameters associated with a particular video object
9 that is selected by a user interaction via a remote device that is operatively coupled
10 to a network; the collaborator logic further configured to output resource
11 coordination information based at least in part on the at least one prioritizing
12 parameter associated with the application and the one or more prioritizing
13 parameters associated with ~~the user interaction~~ particular video object;

14 priority mapping logic operatively coupled to the collaborator logic to
15 receive the resource coordination information and operatively coupled to the
16 packetizer logic to receive the packetized content information, the priority
17 mapping logic configured to selectively associate each received packet of content
18 information with a service class selected from among at least two different service
19 classes based on the resource coordination information, and to selectively output at
20 least one packet of content information based on a priority associated with each
21 service class; and

22 forwarder logic operatively coupled to the priority mapping logic and
23 configurable to provide the at least one packet of content information to the
24 network.

1 **20.** (currently amended): The apparatus as recited in Claim 19, wherein
2 the user interaction comprises selection of the particular video object by at least
3 one of mouse clicking, mouse moving, ~~fast forward, fast backward,~~ object zoom-
4 in, object zoom-out, add or delete.

5
6 **21.** (previously presented): The apparatus as recited in Claim 19, further
7 comprising:

8 network monitoring logic operatively coupled to the collaborator
9 logic and configurable for use with the network and in monitoring network
10 performance, and to output at least one prioritizing parameter associated with the
11 network performance, and

12 wherein the collaborator logic is further configured to receive the at
13 least one prioritizing parameter associated with the network performance, and
14 output the resource coordination information based at least in part on the at least
15 one prioritizing parameter associated with the network performance.

16
17 **22.** (original): The apparatus as recited in Claim 19, further comprising:
18 encoding logic operatively coupled to the packetizer logic and
19 configured to encode initial content information, and output corresponding
20 encoded content information.
21
22
23
24
25

1 23. (currently amended): The apparatus as recited in Claim 22, further
2 comprising:

3 segmentation logic operatively coupled to the encoding logic and
4 configured to segment raw video data into a plurality of video objects, and output
5 initial content information that includes at least one video object of the video
6 objects.

7
8 24. (previously presented): The apparatus as recited in Claim 22,
9 wherein the initial content information includes data representing media
10 information selected from a group comprising video information, audio
11 information, image information, and textual information.

1 25. (currently amended): A system comprising:

2 a network environment including a backbone network, and a first access
3 network and a second access network each being operatively coupled to the
4 backbone network;

5 a plurality of host devices including a first host device operatively coupled
6 to the first access network and a second host device operatively coupled to the
7 second access network, the second host device receiving a user interaction
8 comprising selection of a particular video object; and

9 a plurality of application-aware resource controllers including a first
10 application-aware resource controller operatively configured within the first access
11 network and a second application-aware resource controller operatively configured
12 within the second access network, wherein the first application-aware resource
13 controller is configured to aggregate content information associated with at least
14 one communication session established between the first host device and the
15 second host device via the network environment and to map the aggregated
16 information to at least two service classes selected from a group of two or more
17 different service classes based at least in part on one or more prioritizing
18 parameters associated with the ~~user interaction~~ selection of the particular video
19 object.

1 **26.** (previously presented): The system as recited in Claim 25, wherein
2 at least the first application-aware resource controller is configured to selectively
3 adapt a flow rate associated with the content information based on an identified
4 state of at least one of the first access network, the second access network, or the
5 backbone network .
6

7 **27.** (previously presented): The system as recited in Claim 25, wherein
8 at least the first application-aware resource controller is configured to selectively
9 adapt a flow rate associated with the content information based on at least one
10 identified requirement of the second host device.
11

12 **28.** (original): The system as recited in Claim 25, wherein at least the
13 first application-aware resource controller is configured to control the content
14 information responsive to application-based signaling.
15

16 **29.** (previously presented): The system as recited in Claim 25, wherein
17 at least the first application-aware resource controller is configured to operatively
18 associate a respective priority with each respective service class of the at least two
19 service classes.
20
21
22
23
24
25

1 30. (previously presented): The system as recited in Claim 25, further
2 comprising at least one processing agent operatively configured within the
3 backbone network and configured to selectively filter the aggregated information
4 associated with different communication sessions based on identified bandwidth
5 constraints and service classes.

6
7 31. (previously presented): The system as recited in Claim 25, wherein
8 the content information includes data representing media information selected
9 from a group comprising video information, audio information, image information,
10 and textual information.

11
12 32. (previously presented): The system as recited in Claim 30, wherein
13 the processing agent is further configured to perform packet-level fast transcoding
14 and related signaling.

15
16 33. (currently amended): The method as recited in Claim 1, wherein the
17 user interaction comprises selection of the particular video object by at least one of
18 mouse clicking, mouse moving, ~~fast forward, fast backward,~~ object zoom-in,
19 object zoom-out, add or delete.

20
21 34. (currently amended): The computer-readable media as recited in
22 Claim 12, wherein the user interaction comprises selection of the particular video
23 object by at least one of mouse clicking, mouse moving, ~~fast forward, fast~~
24 ~~backward,~~ object zoom-in, object zoom-out, add or delete.

1 35. (currently amended): The system as recited in Claim 25, wherein the
2 user interaction comprises the selection of the particular video object by at least
3 one of mouse clicking, mouse moving, ~~fast forward, fast backward,~~ object zoom-
4 in, object zoom-out, add or delete.